IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

SKYLINE SOFTWARE SYSTEMS, INC.,	)))	
Plaintiff,	))	
v.	))	CIVIL ACTION NO. 04-11129-DPW
KEYHOLE, INC. and GOOGLE INC.,	))	
Defendants.	))	

DECLARATION OF DINESH MANOCHA, PH.D. IN SUPPORT
OF PLAINTIFF'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

I, Dinesh Manocha, Ph.D., on oath depose and state that:

1.   I know the following information through my own personal knowledge and, if called and sworn as a witness, I could and would competently testify hereto.

2.   I make this declaration in support of the claim construction brief filed by Defendants' Keyhole, Inc. and Google Inc. ("Defendants") and provide my opinion as to what the claims of United States Patent No. 6,496,189 ("the '189 Patent") mean to one ordinary skilled in the relevant art.

3.   I have reviewed the Opening Claim Construction Brief submitted by Defendants Keyhole, Inc. and Google Inc. ("Google"), as well the Declaration of Steve K. Feiner, Ph.D. I submit this Declaration to correct and comment on several inaccuracies contained in Defendants' submission.

MEANING OF DISPUTED CLAIM TERMS IDENTIFIED BY DEFENDANTS

A.   *"downloading"*

4.   "Downloading," a term that appears in Claims 1 and 12 (as well as additional claims), is a commonly understood term, the meaning of which is known to most users of personal computers. In my opinion, a person of ordinary skill in the art in 1999 would have understood "downloading" to include downloading from a remote computer using a network to a hard drive (the most common usage), to a memory stick, to a computer's main memory or other personal electronic device, or to a removable disk. The specification of the '189 Patent notes as much. It provides that: "In some preferred embodiments of the present invention, the processor manages a local cache memory in which the processor stores blocks which cover terrain areas in the vicinity of the current viewpoint. *Preferably*, the processor stores in the cache memory all blocks downloaded from the server." '189 Patent, col. 3, lns. 24-29.

5.   I disagree with Defendant's proposal to require that the "download[ed]" information be "received in local memory." The claims that include the term "downloading" do not so require. I note that one of the preferred embodiments recited in the patent specification provides that the "downloads" go to local memory. This, however, does not mean that *all* downloads must be received in local memory. I understand that the claim terms should not be construed in a manner that limits them only to the preferred embodiment.

B. *"receiving from the renderer"* and *"providing the renderer"*

6.   As noted in my initial declaration, the terms "receiving from the renderer" and "providing the renderer" appear in Claims 1 and 12 and, thus, I understand are not properly the subject of this phase of the Court's claim construction.

7.   Despite the Court's previous interpretation of the term "renderer,"

Defendants also seek construction of the phrase "providing the renderer," which appears

in the claim phrase: "*providing the renderer* with a first data block." Again, Defendants

seek a construction which requires that another object besides the renderer provides the

first data block.

8.   The patent specification provides as follows:

> In *some preferred embodiments* of the present invention, the
> processor runs a rendering program . . . The rendering program
> orders the blocks it needs using a cache manager.

'189 Patent, col. 3, lns. 54-67. This specification also refers to software process or to a

combination of software or hardware. As stated above, I understand that the claim terms

should not be limited to one or more embodiments. In addition, it is significant that the

claims say "renderer," not "rendering program" or software processes (which are found

in other portions of the patent specification). Google's construction is not consistent with

the claim terms.

C.   **"*downloading . . . if the provided block from the local memory is not
at the indicated resolution level*"**

9.   This claim phrase also appears in Claim 1 and 12 and, therefore, does not

require construction. However, as Defendants have raised various arguments about the

meaning of this claim phrase, I address them below.

10.   The claim language at issue requires that activity meeting the limitations

of Claim 1 (and other claims) must include downloading additional blocks "if the

provided block from the local memory is not at the indicated resolution level." Deciding

on an optimal resolution level is quite different from a "determination" that a block which

has been provided is at a requested resolution level. I understand that Defendants

contend that this requires that performing the method of Claim 1 must include a "determination of" whether the first block is at the indicated resolution level. The portions of the patent specification, upon which Defendants rely, demonstrate what is said to be "determined" in the claim is not whether the first block provided is at the indicated resolution level, but rather whether the block the renderer has asked for is in cache memory. '189 Patent, col. 3, lines 60-64 ("if the block is not carried by the cache manager"); col. 11, lines 62-65 ("if they are not already stored in cache memory"); col. 14, lines 32-42 ("If block **42** itself is stored in cache memory **32**").

11.   I also disagree with Dr. Feiner's statement at Paragraph 25 of his declaration that "[w]hen an action is conditional, a computer program must make a determination as to whether the specified condition is met in order to take appropriate action." There are many ways for a program to know that a condition X is met besides testing for it (or "making a determination"). Notably, the program can test for other different conditions that, in turn, imply the condition X. These other tests can be scattered in different places in the code. The flow of control in the code can be designed such that if the processor is executing at a particular place in the code, condition X must be true or the processor would not be executing that code. The program can even be constructed so that it ensures that X is true always, in which case the code can always assume X to be true. Thus, the logical starting point for Dr. Feiner's analysis is wrong.

D.   "*Internet*"

12.   In my opinion, Defendants' proposed construction for the term "Internet" directly contradicts how that term would have been understood to one of ordinary skill in the art. In 1999, it was commonly understood by those of ordinary skill in the art (and, arguably, by all users of the World Wide Web, that there was one Internet. Defendants'

-4-

-5-

proposed definition would encompass any network that uses Internet protocols. In 1999

(and today), there were many such networks. Defendants' definition is inconsistent with

the universal understanding that there is one Internet.

13.   Connected to the Internet, permanently or as needed, there are many

private networks in homes, businesses, schools, and government agencies. The

connections from these private networks to the Internet generally pass through

companies, known as Internet service providers, which are subject to numerous standards

administered by standards bodies. Unconnected to the public Internet, there are also

private networks that use Internet protocols, each of which Defendants would have the

Court define as "the Internet."

14.   To understand the meaning of the term "Internet," it is important to

examine the full language of Claim 8, in which this term appears. Claim 8 requires, in

part, "downloading the blocks via the Internet." To download blocks "via the Internet"

means that the blocks pass through the public Internet, not that they pass through a

private network.

Signed under the penalties of perjury this 12th day of October, 2006.

/s/ Dinesh Manocha, Ph.D.
Dinesh Manocha, Ph.D.

-6-

CERTIFICATE OF SERVICE

I hereby certify that this document, filed through the ECF system, will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non-registered participants on October 12, 2006.

/s/ H. Joseph Hameline
H. Joseph Hameline